

WORKPLAN
FURTHER OFF-SITE GROUNDWATER INVESTIGATION
AT
MW19/HOT SPOT 1

L.E. CARPENTER AND COMPANY
WHARTON, NEW JERSEY
USEPA ID# NJD002168748

October 2000



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Table of Contents

1.0 INTRODUCTION	1
2.0 MW19/HS1 INVESTIGATIVE AND REMEDIAL BACKGROUND.....	2
3.0 PROPOSED SCOPE OF WORK	7
3.1 ROAD OPENING REQUEST(S) AND UTILITY LOCATION.....	7
3.2 MONITORING WELL INSTALLATION, DEVELOPMENT, AND SURVEYING	7
3.2.1 <i>Monitoring Well Installation</i>	7
3.2.2 <i>Monitoring Well Development and Decontamination</i>	8
3.2.3 <i>Professional Well Survey</i>	8
3.3 MONITORING WELL SAMPLING.....	9
3.4 INVESTIGATION DERIVED WASTES	9
3.5 APPLICABLE REMEDIAL ALTERNATIVES.....	9
4.0 SCHEDULE	10
5.0 HISTORICAL REPORTS AND MANUALS	11
6.0 SITE HEALTH AND SAFETY	12
6.1 MINIMUM REQUIREMENTS.....	12

List of Figures

Figure 1:	Site Location Map
Figure 2:	MW19/HS1 Groundwater Contours and Flow Direction for January 2000
Figure 3:	MW19/HS1 Groundwater Contours and Flow Direction for April 2000
Figure 4:	MW19/HS1 Groundwater Contours and Flow Direction for July 2000
Figure 5:	Proposed Off-Site monitoring Well Locations

List of Appendices

Appendix A:	NJDEP Letter dated August 1, 2000
Appendix B:	Workplan Schedule
Appendix C:	Health and Safety Plan
Appendix D:	Hazard Assessment
Appendix E:	Emergency Points of Contact

Section 2

MW19/HS1 Investigative and Remedial Background

The LEC facility is located at 170 North Main Street, in Wharton, New Jersey (Figure 1). The MW19/HS1 area is situated at the northwest corner of the LEC site, immediately adjacent to Building 9 (Figure 2). This area is associated with two former 10,000-gallon underground storage tanks (USTs) which contained methyl ethyl ketone (MEK) and waste MEK and waste pigments (UST E-3 and UST E-4). In accordance with the 1986 ACO, GeoEngineering, Inc. and Roy F. Weston (Weston) conducted a site-wide Remedial Investigation (RI) and separated the L.E. Carpenter site into three areas. The MW19/HS1 area was classified as Area III. Four (4) test pits (TP-63 to TP-66) were excavated around the two USTs. Soil samples were collected from immediately above the water table (between 7 feet and 9 feet bgs) and analyzed for volatile organic compounds (VOCs), base neutral organics (BNO), and priority pollutant metals. No VOCs were detected above quantification limits and residual concentrations of cadmium were detected in TP-63. However, test pit sample results did identify elevated concentrations of DEHP. Subsequently, DEHP was identified as the MW19/HS1 area contaminant of concern.

USTs E-3 and E-4 and visually impacted soil surrounding the USTs were removed from the site in 1991. A detailed account of site UST removal activities is presented in the Final Technical Report for Tank Removal Operations (Roy F. Weston, September 1991). In 1991, after tank removal activities had been completed, Weston installed groundwater monitoring well MW-19 in the area immediately adjacent to the excavation to determine whether groundwater had been impacted by previous operations conducted at the facility. The results of the groundwater sampling activities conducted at that time did not identify the presence of VOCs at concentrations above the method detection limits with the exception of 2-Butanone (MEK).

In November 1994, Weston began the excavation of DEHP impacted soils in the MW19/HS1 area. The final size of the excavation was approximately 70 feet long, ranged from 16 to 33 feet in width, and had an average depth of 9 feet below grade. Analytical results for DEHP from the sidewall samples ranged from 0.24 mg/kg to 140 mg/kg. Approximately 190 cubic yards of soil were removed from the excavation. Quarterly groundwater sampling events conducted at MW-19 by Weston during first and second quarter 1995 identified the presence of BTEX, in addition to MEK, at concentrations exceeding the NJGWQS stipulated in the ROD. In October 1996, Weston submitted a delineation plan to the NJDEP to further define the extent of VOC

impact to groundwater and further delineate both VOC and DEHP impact to saturated and non-saturated soils in the MW19/HS1 area. Weston installed and sampled temporary monitoring wells and collected and analyzed soil samples. The results of chemical analyses performed on the groundwater samples collected from the temporary monitoring wells identified the presence of VOCs at concentrations similar to those identified in monitoring well MW-19 in 1995. Additionally, soil samples at a number of locations exhibited DEHP concentrations exceeding the Impact to Groundwater Soil Cleanup Objective of 100 mg/kg outlined in the ROD.

RMT received approval of an additional MW19/HS1 area groundwater delineation plan in January 1998. Subsequently, in February 1998, RMT conducted a subsurface investigation that included the installation and sampling of an additional five (5) groundwater monitoring wells (MW19-1 through MW-19-5). We identified VOC concentrations exceeding the NJGWQS in MW19-1, MW19-2, MW19, and MW19-5. However, when we compared these results to the VOC concentrations found during Weston's 1996 sampling (BW-1 through BW-9), we observed significant reductions in the concentrations of VOCs in monitoring wells MW19 and MW19-2. This included reductions in concentrations as well as the disappearance of MEK. Based on this observation, we concluded that natural attenuation of the volatile groundwater contaminants (MEK, benzene, toluene, ethylbenzene, and xylenes) was likely occurring. RMT also analyzed groundwater samples for the presence of DEHP, and found that concentrations exceeded NJGWQS in MW19-1 and MW19-5.

The NJDEP letter dated July 15, 1998 required L.E. Carpenter to further delineate the off-site extent of BTEX and DEHP impact to groundwater downgradient from the MW19/HS1 area. RMT, on behalf of L.E. Carpenter, prepared an investigation workplan and submitted it to the NJDEP in November 1998. On December 21, 1998, NJDEP required that LEC perform a groundwater screening investigation using Hydropunch® or other similar methodology. RMT performed Hydropunch® sampling on April 21, 1999. However, as anticipated we encountered significant difficulties advancing the Hydropunch® apparatus at those off-site sample locations proposed in the approved workplan. We experienced these difficulties because of the existence of dense glacial-till at approximately 6-14 feet below ground surface (bgs). We advanced 24 off-site Hydropunch® holes, however four (4) successfully penetrated the water table (11 to 13 feet bgs). Extracted groundwater samples from each of the four Hydropunch® locations were analyzed for BTEX (EPA Method 602) and DEHP (EPA Method 625). BTEX were not detected in any of the samples. DEHP was detected in samples collected from Hydropunch® locations HP-2 and HP-3, but the values were estimated and DEHP was also detected in the blank. No detections for BTEX nor DEHP were reported in excedence of NJGWQS. The locations of the four off-site Hydropunch® wells are shown on Figure 2.

On behalf of LEC, RMT submitted the MW19/HS1 Area Remedial Investigation Report documenting the installation of three additional permanent monitoring wells and sampling activities to the NJDEP in March 2000. The NJDEP issued comments regarding the results of this investigation in their letter dated April 13, 2000 (Appendix A). We then submitted a short letter report dated May 15, 2000 (Appendix B) that provided a more detailed analysis of data from the MW-19 area. RMT's May 15 letter report contained the following conclusions:

- A regional sewer line intercepts shallow groundwater.
- The regional sewer has a localized effect on shallow groundwater flow-direction, which appears to prevent migration of groundwater towards and under the residences on the north side of Ross Street.
- The distribution of BTEX constituents, based on isoconcentration contours, agree well with the flow directions based on groundwater contours. In other words, the isoconcentration contours are roughly parallel to a flow direction that trends northwards at Building 9, and turns northeast and east as the regional sewer is approached. This shows that the lateral extent of groundwater contamination has been adequately defined.
- A strong upward vertical gradient exists in the MW19/HS-1 area, which together with the site stratigraphy precludes downward migration of dissolved VOCs.

Despite these conclusions, the NJDEP/EPA issued additional comments in their letter dated August 1, 2000 requiring the installation of additional groundwater monitoring wells at an off-site location north of the MW19 area. Although we take issue with some of these comments, LEC agrees to install and test three additional permanent monitoring wells in order to eliminate any remaining disagreement regarding the delineation of this area. We address the NJDEP/EPA comments below in the same order as presented in the NJDEP August 1 letter as a way of explaining the purpose of each of the three proposed wells:

Response to NJDEP Comments

1. For convenience, we have reproduced herein Figure 1 from our May 15 letter as Figure 2. The sewer line's effect on groundwater flow can be visualized clearly by the bend of groundwater contours northwards. The data that supports these contours were included on the original Figure as shown on Figure 2. The groundwater elevations from MW-19-5, MW-19-6, MW-19-7, and MW-19-8 are the controlling points that make the groundwater contours bend to the north, roughly perpendicular to Ross Street and the buried regional interceptor sewer line. While there is some interpretation in the details of the elevation contour placement, we have not been able to create an alternative interpretation that would allow contaminants in the MW-19 area to travel northwards. We have also included groundwater elevation contours for April 2000 (Figure 3) and July 2000 (Figure 4). All of

the groundwater contour maps account for the potential effect that seasonal fluctuations of groundwater may have on the flow pattern in this area, however, there is no significant change in the pattern of groundwater contours. The data continue to demonstrate that shallow groundwater flows northeasterly towards and then parallel to the regional sewer, and that groundwater cannot migrate across Ross Street under the residences to the north.

2. NJDEP is correct in stating that groundwater monitoring well MW-19-7 is at the leading edge of groundwater contamination (furthest downgradient), and the total BTEX concentrations are above the Groundwater Quality Criteria. The "clean zone" was previously defined with data from hydro-punch location HP-4 (VOCs were not detected), which was located about 100 feet further downgradient from MW-19-7. However, as NJDEP suggests, this point cannot be verified any further without a permanent monitoring well. Therefore, we will install a well near HP-4 as shown on Figure 5 that will provide a better definition of the downgradient clean zone.
3. NJDEP again states that screening data cannot be used to confirm groundwater quality over one year after the screening data was collected, and therefore horizontal delineation has not been established. As stated above, we propose to install an additional downgradient well in order to provide a repeatable sampling point for completing the downgradient horizontal delineation.

Response to EPA Comments

4. As stated above, we based the "sharp turn" in flow direction on groundwater elevations in MW-19-5, MW-19-6, MW-19-7, and MW-19-8. These elevations control the groundwater contours regardless of the fact that elevations in two of the wells were the same in January 2000. When groundwater elevation in two separate wells are the same, it is quite definitive, and means that a groundwater elevation contour of that same value must pass through the two data points. Furthermore, data contoured from April and July 2000 also support the sharp turn of the groundwater contours in this area (Figures 3 and 4). The presence of the sewer line does not complicate the placement of groundwater contours, but rather provides additional evidence for their northward bend. It is true that identification of the sewer line in itself is not sufficient data upon which to rule out a northward groundwater-flow component. That is why we used groundwater elevation contours to determine flow direction. The fact that the sewer line intercepts the groundwater table simply supports the curvature of the groundwater elevation contours. Even if the contours were "interpreted" to curve further east or west, they still would not represent a northward flow component from the area of groundwater contamination. Nevertheless, we do agree that the sewer line has the potential to act as a preferred migration pathway, if dissolved phase constituents were migrating that far. Even though the groundwater quality data and elevation contours

indicate that minimal, if any, dissolved phase constituents are actually migrating as far as the sewer line, LEC agrees to install an additional well between MW-19-6 and MW-19-8 (Figure 5). This well will provide additional definition of groundwater flow directions and should suffice to verify whether constituents are migrating to the sewer line.

5. RMT did not cite "the floating behavior of separate phase LNAPL" as "rationale for limiting the investigation to delineate shallow groundwater only". There is no evidence that LNAPL occurs in the MW-19 area. However, the BTEX and DEHP constituents dissolved in groundwater are a result of a past LNAPL release. LNAPL's will either dissipate within the vadose zone, or accumulate at the top of the water table, and cannot migrate downwards through the saturated zone. This alone would tend to keep the highest concentrations of LNAPL dissolved phase near the top of the water table. This is especially true in the MW-19 area because the lateral extent of dissolved phase constituents is limited to such a very small area. Downward vertical migration would be spatially limited even if there were a downward vertical component of groundwater flow, but in this case, an upward vertical gradient exists in the MW-19 area. In fact, vertical gradients throughout the entire LEC site are upwards. At GEI-2I and GEI-2S, the upward vertical flow component can have a hydraulic gradient as much as an order of magnitude greater than the hydraulic gradient of the horizontal flow component (Figure 3). In addition, other areas of the LEC site where BTEX and DEHP concentrations are very high (at and downgradient of the free product areas), data show that there has been no downward migration. Finally, an upward vertical gradient persists over time at the GEI-2 location, as well as at the nearby MW-16 cluster (Table 1). Based on the data described above we would not expect downward vertical migration of LNAPL constituents in the MW-19 area.

Despite existing data that shows adequate definition of the lateral and vertical extent of contaminants in groundwater, LEC agrees to install the three additional wells (Figure 5) discussed above. However, we must emphasize that the chances of finding significant dissolved phase constituents migrating along the sewer line or under the sewer and across Ross Street are not very probable. If the data collected during completion of this workplan confirms the limited lateral extent and concentrations of the dissolved VOCs and semivolatile organic compounds (SVOCs), LEC will not install any more wells in this area.

Section 3

Proposed Scope of Work

This section presents the proposed investigation activities for the MW19/HS1 area of concern per the comments outlined in the NJDEP letter dated August 1, 2000,

3.1 Road Opening Request(s) and Utility Location

RMT, on behalf of LEC, will submit a "Road Opening Request" application package to the Borough of Wharton to request approval for the installation of the three off-site groundwater monitoring wells. This application process is anticipated to take three weeks. We will include the written approval from the borough authorizing the well installation in the groundwater investigation report documenting field activities and well sampling.

Additionally, all off-site utilities will be located prior to the commencement of monitoring well installation activities. RMT, on behalf of LEC, will call NJ One Call Dig to obtain a job specific dig number.

3.2 Monitoring Well Installation, Development, and Surveying

3.2.1 Monitoring Well Installation

RMT believes that we have completed the lateral delineation of the MW19/HS1 area based on previously supplied data as described above in the Background section of this Workplan. However, we understand that NJDEP and EPA wants further assurance that constituents are not migrating into the residential area along the north side of Ross Street or down the regional interceptor sewer. In their August 1, 2000 letter, NJDEP and EPA require LEC to install additional monitoring wells. Therefore, we will install three (3) additional monitoring wells in order to provide NJDEP/EPA with further verification that dissolved-phase constituents are not migrating underneath and north of the regional sewer line, or along the sewer line. EPA specified the location for one of the new wells (directly north of MW19-6 on the north side of Ross Street; Figure 5) during a telephone conference on July 31, 2000. A New Jersey licensed well driller using the air-rotary method will install the monitoring wells. Monitoring well installation permits will be obtained and well installation reports will be submitted to NJDEP upon completion. We will install the monitoring wells in accordance with procedures outlined in the NJDEP's *Field Sampling Procedures Manual* (Appendix 7-1(B) Monitor Well Requirements for Unconsolidated Aquifers).

Continuous split spoon sampling will be conducted to characterize the stratigraphy of the underlying soils and to determine appropriate well depths and screen intervals. Soil samples will be examined in the field and classified using the Unified Soil Classification System (USCS). In addition, each soil sample will be examined in the field for indications of staining and/or contamination and screened with a photoionization detector (PID) for evidence of volatile contamination. Soil boring logs will be presented in the investigation report.

RMT estimates that the groundwater table varies from approximately 9 to 12 feet bgs. Because groundwater often fluctuates as much as 3 or more feet, we will construct each monitoring well with 10-foot long 2-inch diameter stainless steel well screens (0.020 slot size). We will complete the wells with 10-foot long 2-inch diameter stainless-steel riser-pipes and 2-inch diameter stainless steel slip cap/bottoms. We will then coordinate placement of a silica-sand filter pack in the borehole annulus around the well screen and a 5-foot bentonite seal above the filter pack. We will grout the remaining boring annulus with a cement bentonite grout according to NJDEP requirements. To minimize potential off-site traffic interference's, we will construct the three wells with flush mounts to existing grade with road-rated protective well casings and covers. All monitoring well locations will be restored to original grade and condition.

3.2.2 Monitoring Well Development and Decontamination

RMT will coordinate development of the monitoring wells by means of over-pumping and bailing after installation is complete. We will continue to develop the wells to minimize formation water turbidity. We will contain all development and decontamination waters, stage them in an appropriate location, and remove them along with fluids extracted during monthly enhanced fluid recovery (EFR) events.

The subcontractor will decontaminate drilling and development equipment as described in the QAPP. Equipment decontamination will take place before and between sampling locations using a high-pressure washer. Sampling equipment will be decontaminated between samples using a soap and distilled water rinse.

3.2.3 Professional Well Survey

A New Jersey-Licensed surveyor will survey the top of the innermost casing (excluding cap) of each of the three monitoring wells to the nearest 0.01 foot. The survey point shall be the highest point of the casing, and will be marked on each well after completion.

3.3 Monitoring Well Sampling

All monitoring wells specific to the MW19/HS1 area (both existing wells and the proposed new wells) will be sampled in accordance with procedures outlined in the NJDEP's *Field Sampling Procedures Manual*. The groundwater samples will be collected at all locations at least two weeks (14-days) after the three new wells have been developed in accordance with Chapter 7 - Section H (5)(c)(i) of the NJDEP's *Field Sampling Procedures Manual*. Prior to sampling, each of the three wells will be purged using a peristaltic pump with dedicated tubing for each well. Groundwater samples will be collected from all monitoring wells using dedicated teflon bailers and analyzed for DEHP (U.S. EPA SW846 Method 625) and BTEX (U.S. EPA SW846 Method 602). Well purging and sampling activities will be performed by Severn Trent Services, a NJDEP certified laboratory.

submittal
to low flow
?

Quality control samples will be collected per the QAPP, to include one field blank per day of sampling, one trip blank per shipment, and one duplicate sample (5 percent of the total number of samples collected).

3.4 Investigation Derived Wastes

Soil cuttings generated from the drilling process will be containerized in 55-gallon steel drums, labeled, and staged appropriately pending off site disposal. RMT will relocate the drums to L.E. Carpenter property. RMT will characterize the soil and arrange for off-site disposal at an approved landfill.

RMT will arrange placement of the decontamination and monitoring well purge fluids in 55-gallon drums and dispose of them along with fluid extracted during a monthly EFR event.

3.5 Applicable Remedial Alternatives

RMT will include recommendations regarding the applicability of remediation by natural attenuation in a final report describing the results of the work outlined herein. In addition, RMT will be including the MW-19/HS1 area in a site-wide groundwater-monitoring program as part of a workplan to continue evaluating the monitored natural attenuation (MNA) remedial alternative. The MNA workplan will address dissolved phase constituents in the MW-19 area and in the southeast part of the LEC property. We are currently preparing that workplan and will submit it separately.

NA
parameters
for?

Section 4 Schedule

A schedule for implementation of this proposed workplan is presented as Appendix B. RMT will initiate the schedule after NJDEP/EPA reviews and approves this workplan. We have identified appropriate allocations of time to perform the proposed scopes of work, and identified corresponding subcontractor scopes as tasks. This schedule and adherence to the proposed time frames are based upon the following assumptions:

- NJDEP review time for this workplan is no longer than 30 days.
- Village of Wharton Road Opening Request approval takes three weeks.
- The lag time between the development and sampling of the three proposed monitoring wells is two weeks.
- Extreme weather will cause shifts in this schedule (snow, ice, rain, drought, Acts of God etc.)

Section 5

Historical Reports and Manuals

The following is a summary of reports and manuals referenced as supplemental documents for implementation of this workplan:

HISTORICAL REPORTS

- NJDEP Administrative Consent Order (ACO) dated September 26, 1986
- NJDEP Superfund Record of Decision (ROD) dated April 1994
- Workplan for Phase I ROD Implementation dated October 1994, Roy F. Weston, Inc.
- Quality Assurance Project Plan (QAPP) dated October 1994, Roy F. Weston, Inc.
- Site Health and Safety Plan (HASP) dated October 1994, Roy F. Weston, Inc.
- MW19 Delineation dated June 1998, RMT, Inc.
- HOT SPOT-1 Delineation dated June 1998, RMT, Inc.
- MW19/HS1 Off-Site Subsurface Investigation dated June 1999, RMT, Inc.
- NJDEP Response letter dated April 15, 2000
- Additional MW-19 area data evaluation letter dated May 15, 2000, RMT, Inc.
- NJDEP response letter dated August 1, 2000

SITE REFERENCE AND GUIDANCE MANUALS

- *NJDEP Field Sampling Procedures Manual (1992)*
- *Technical Requirements for Site Remediation (N.J.A.C 7:26E-2.1)*

Section 6

Site Health and Safety

6.1 Minimum Requirements

All investigative activities related to this workplan must be performed in accordance with all federal, state, and local statutes, regulations, and ordinances. These include, but are not limited to, the standards contained in 29 CFR 1910 General Industry U.S. Department of Labor, Occupational Safety and Health Administration (OSHA). A site specific Health and Safety Plan (HASP) and Hazard Assessment are presented as Appendix C and Appendix D respectively. A list of emergency points of contact specific to all scopes of work at the LEC site is presented as Appendix E.

Workers shall wear standard industrial protective gear including the following:

- Protective eyeglasses or goggles, as required
- Ear protection, as required
- Rubber gloves, as required
- Tyvek Suits, as required
- Steel Toed Boots, mandatory
- Hard Hats, mandatory

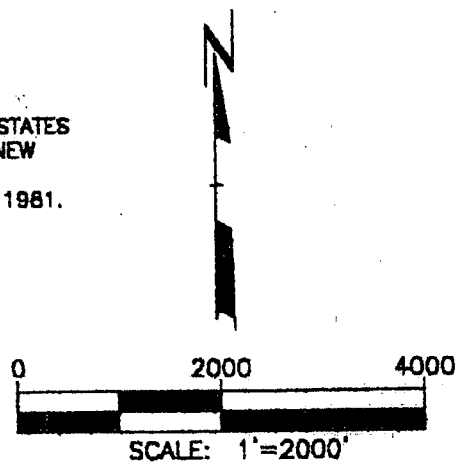
Most investigative activities should not lead to the direct contact or inhalation of extracted soil, groundwater or vapors. In general, avoid direct skin contact with groundwater water, decontamination water, and soils. Flush any skin contacted with groundwater, soils, decontamination water, and remove wetted clothing as soon as practicable.



NOTE:

MAP OBTAINED FROM UNITED STATES
GEOLOGICAL SURVEY DOVER, NEW
JERSEY 7.5 MINUTE SERIES
QUADRANGLE (TOPOGRAPHIC), 1981.

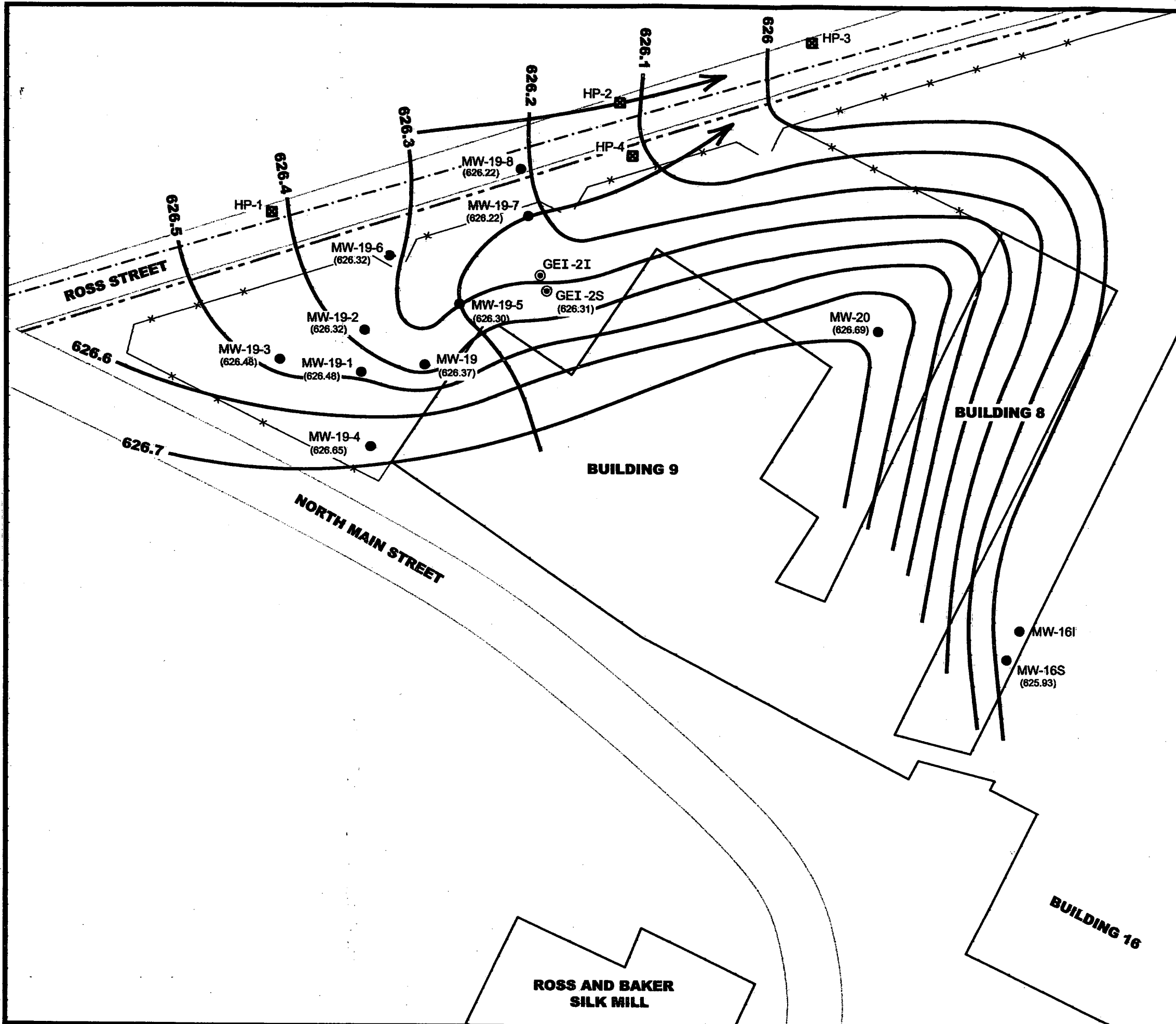
**SITE LOCATION MAP
LE CARPENTER AND COMPANY
WHARTON, NEW JERSEY**



RMT.

DWN. BY:	DAY
APPROVED BY:	G. Kenney
DATE:	5/2/00
PROJ #	3863.17
FILE #	38681704

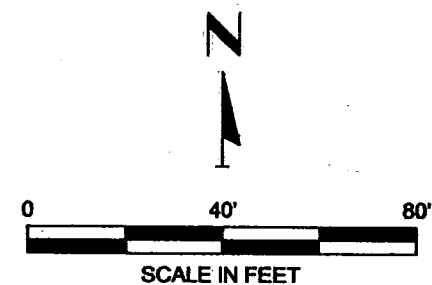
FIGURE 1

**LEGEND**

- APPROXIMATE PROPERTY LINE
- FENCE LINE
- APPROXIMATE LOCATION OF ROCKAWAY RIVER REGIONAL INTERCEPTOR SEWER
- 626 --- GROUNDWATER ELEVATION CONTOUR
- ← GROUNDWATER FLOW DIRECTION
- MW-19-7 (626.69) ● MONITORING WELL LOCATION AND NUMBER WITH GROUNDWATER ELEVATION
- GEI-2S (626.31) ⊙ GEOPROBE INSTALLED PIEZOMETER LOCATION AND NUMBER WITH GROUNDWATER ELEVATION
- HP-3 □ APPROXIMATE LOCATIONS OF HYDRO PUNCH SAMPLES

NOTES

1. GROUNDWATER ELEVATIONS BASED ON LEVELS MEASURED ON JANUARY 17, 2000.



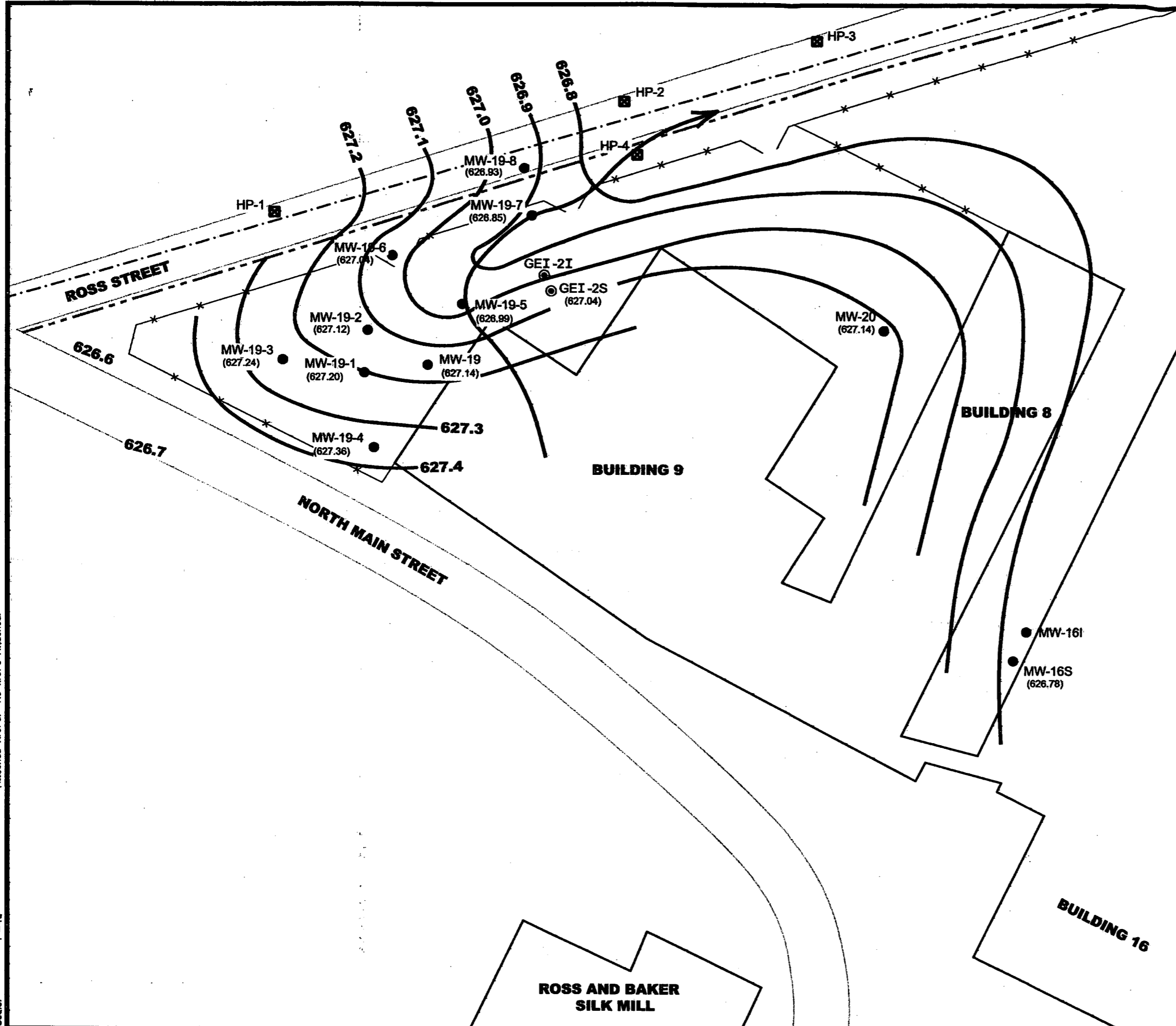
**LE CARPENTER
WHARTON, NEW JERSEY**

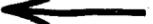
**MW-19 HOT SPOT GROUNDWATER CONTOURS AND
FLOW DIRECTION FOR JANUARY 2000**

DRAWN BY:	SJL	PROJECT NUMBER:	3868.10
CHECKED BY:	JDD	FILE NUMBER:	38681060.DWG
APPROVED BY:		DATE:	OCTOBER 2000

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P.O. BOX 991 48106-0991
PHONE: 734-971-7080
FAX: 734-971-9022



 APPROXIMATE PROPERTY LINE
 FENCE LINE
 APPROXIMATE LOCATION OF ROCKAWAY RIVER
 REGIONAL INTERCEPTOR SEWER
626  GROUNDWATER ELEVATION CONTOUR
 GROUNDWATER FLOW DIRECTION
MW-19-7
 (626.69) ● MONITORING WELL LOCATION AND
 NUMBER WITH GROUNDWATER ELEVATION
GEI-2S
 (626.31) ⊙ GEOPROBE INSTALLED PIEZOMETER LOCATION
 AND NUMBER WITH GROUNDWATER ELEVATION
HP-3
 ⊠ APPROXIMATE LOCATIONS
 OF HYDROPUNCH SAMPLES

1. GROUNDWATER ELEVATIONS BASED ON LEVELS MEASURED ON APRIL 13, 2000

UPWARD VERTICAL GRADIENT AT GEI-2

HYDRAULIC HEAD PRESSURE AT GEI- 2 = 627.53

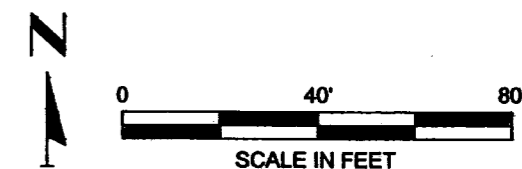
DIFFERENCE IN HEAD PRESSURE BETWEEN GEI-2S
AND GEI-2 = 0.49 FEET

DISTANCE BETWEEN GEI-2S/2I SCREENS = 11.04 FEET

UPWARD VERTICAL GRADIENT = 0.04 ft./ft.

LATERAL GRADIENT = 0.004 ft./ft.

UPWARD VERTICAL GRADIENT AT MW-16
HYDRAULIC HEAD PRESSURE AT MW-16I = 628.95
DIFFERENCE IN HEAD PRESSURE BETWEEN MW-16S
AND MW-16I = 0.17 FEET
DISTANCE BETWEEN MW-16S/16I SCREENS = 14.8 FEET
UPWARD VERTICAL GRADIENT = 0.01 ft./ft.
LATERAL GRADIENT = 0.004 ft./ft.



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MW-19 HOT SPOT GROUNDWATER CONTOURS AND FLOW DIRECTION FOR APRIL 2000

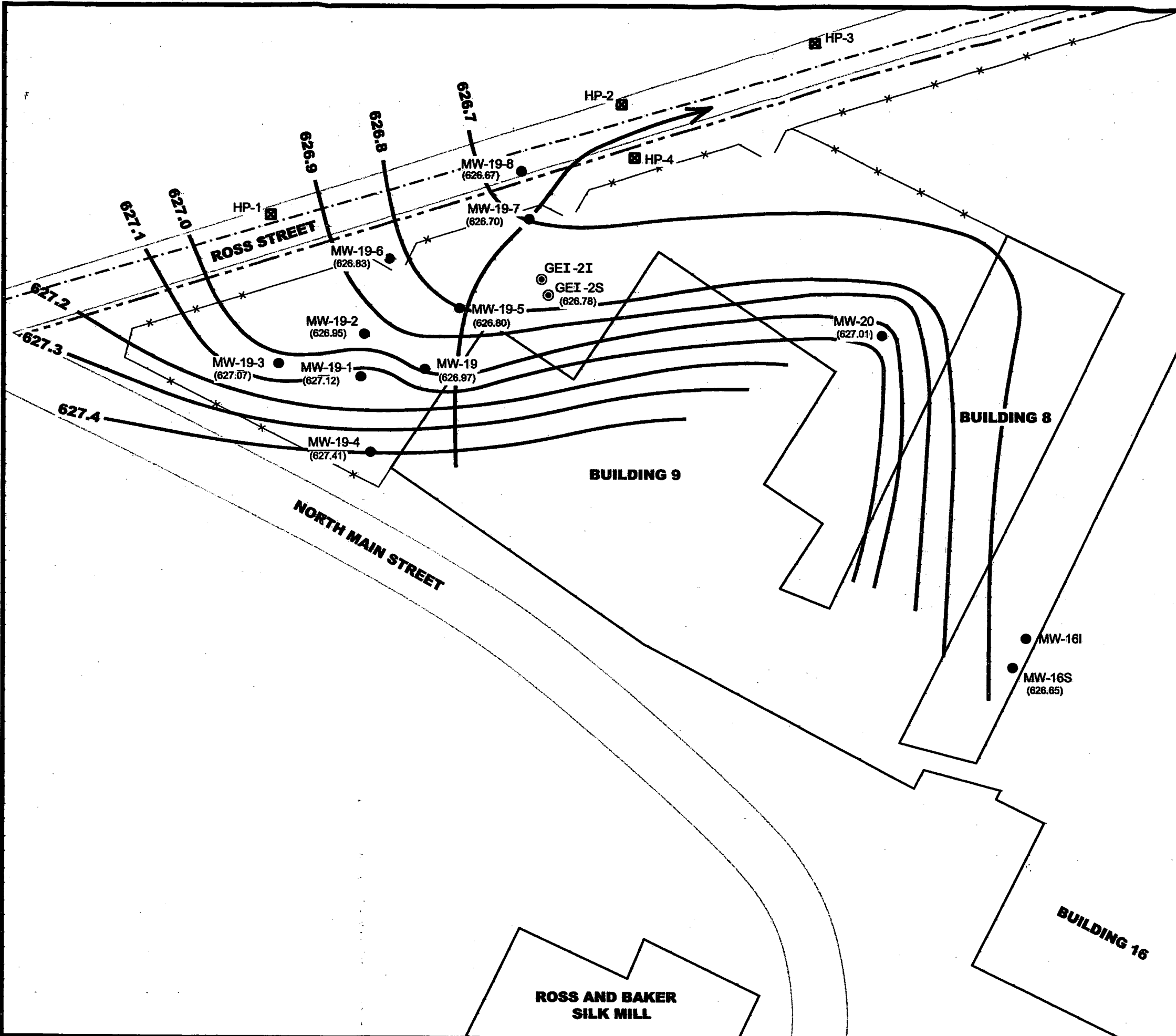
DRAWN BY:	SJL	PROJECT NUMBER:	3868.10
CHECKED BY:	JDD	FILE NUMBER:	38681061.DWG
APPROVED BY:		DATE:	OCTOBER 2000

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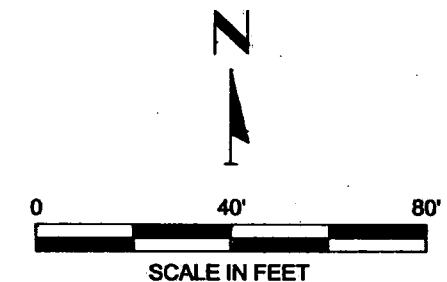
FIGURE 3

**LEGEND**

- APPROXIMATE PROPERTY LINE
- x— FENCE LINE
- APPROXIMATE LOCATION OF ROCKAWAY RIVER REGIONAL INTERCEPTOR SEWER
- 626 — GROUNDWATER ELEVATION CONTOUR
- ← GROUNDWATER FLOW DIRECTION
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- HP-3 ■ APPROXIMATE LOCATIONS OF HYDROPUNCH SAMPLES

NOTES

1. GROUNDWATER ELEVATIONS BASED ON LEVELS MEASURED ON JULY 31, 2000.



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WHARTON, NEW JERSEY**

**MW-19 HOT SPOT GROUNDWATER CONTOURS AND
FLOW DIRECTION FOR JULY 2000**

DRAWN BY:	SJL	PROJECT NUMBER:	3868.10
CHECKED BY:	JDD	FILE NUMBER:	38681062.DWG
APPROVED BY:		DATE:	OCTOBER 2000

RMT INC.
®

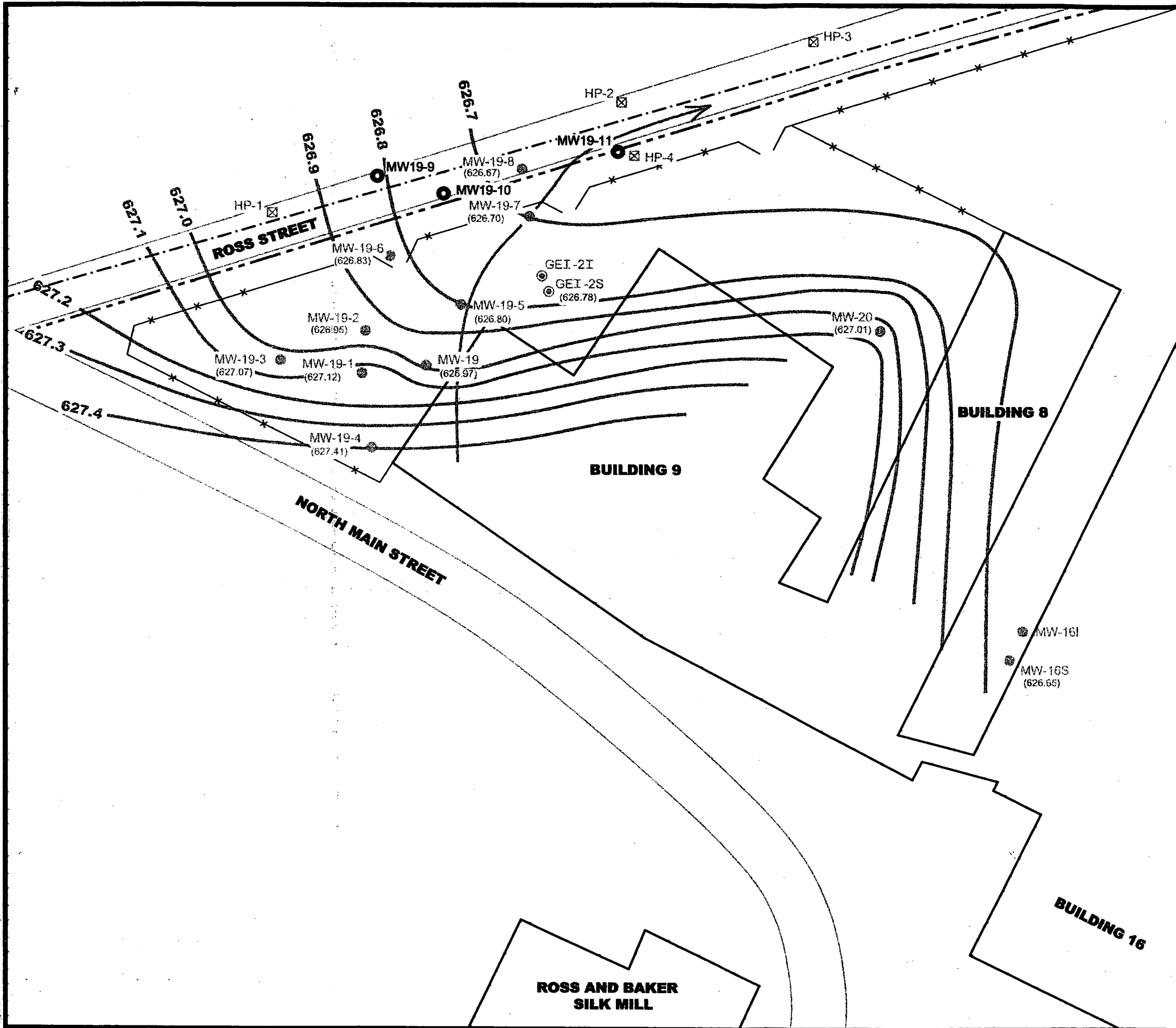
1143 HIGHLAND DRIVE, SUITE B
ANN ARBOR, MI. 48106-2237

P.O. BOX 991 48106-0991
PHONE: 734-971-7080
FAX: 734-971-9022

FIGURE 4

370003 Bytes
Dwg Size: Monday, October 23, 2000
Plot Date: 07:28:11 AM
Plot Time: Attached 'xref's: No xref's Attached.

J:\03868\10\38681062.dwg
Drawing Name: lucidos
Operator Name: 1=40'
Scale:

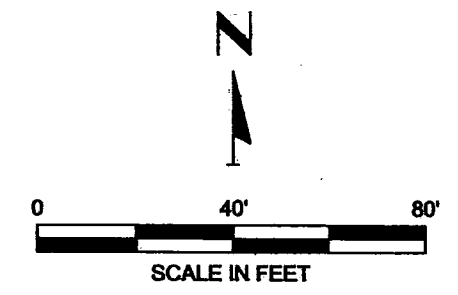


LEGEND

- APPROXIMATE PROPERTY LINE
- x- FENCE LINE
- x- APPROXIMATE LOCATION OF ROCKAWAY RIVER REGIONAL INTERCEPTOR SEWER
- 626- GROUNDWATER ELEVATION CONTOUR
- ← GROUNDWATER FLOW DIRECTION
- MW-19-7 (626.69) ● MONITORING WELL LOCATION AND NUMBER WITH GROUNDWATER ELEVATION
- GEI-2S (626.31) ● GEOPROBE INSTALLED PIEZOMETER LOCATION AND NUMBER WITH GROUNDWATER ELEVATION
- HP-3 ⊠ APPROXIMATE LOCATIONS OF HYDROPUNCH SAMPLES
- PROPOSED SHALLOW WELL LOCATION AND NUMBER

NOTES

- GROUNDWATER ELEVATIONS BASED ON LEVELS MEASURED ON JULY 31, 2000.



**LE. CARPENTER
WHARTON, NEW JERSEY**

PROPOSED OFF-SITE MONITORING WELLS

DRAWN BY:	SJL	PROJECT NUMBER:	3868.10
CHECKED BY:	JDD	FILE NUMBER:	38681063.DWG
APPROVED BY:		DATE:	OCTOBER 2000

RMT INC.

1143 HIGHLAND DRIVE, SUITE B
ANN ARBOR, MI. 48108-2237

P.O. BOX 991 48108-0991
PHONE: 734-971-7080
FAX: 734-971-8022

PLOT DATA

Drawing Name: J:\03868\10\38681063.dwg
Operator Name: lucidos
Scale: 1"=40'

Dwg Size: 370003 Bytes
Plot Date: Monday, October 23, 2000
Plot Time: 07:28:1105 AM
Attached Xref's: No xref's Attached.

FIGURE 6

Appendix A
NJDEP Letter Dated August 1, 2000



State of New Jersey

Christine Todd Whitman
Governor

Department of Environmental Protection

Robert C. Shinn, Jr.
Commissioner

CERTIFIED MAIL
RETURN RECEIPT REQUESTED
NO. Z456 933 545

AUG 01 2000

Mr. Cristopher Anderson
Director Environmental Affairs
L.E. Carpenter & Company
Suite 36-5000
200 Public Square
Cleveland, OH 44114-2304

Dear Mr. Anderson:

Re: L.E. Carpenter Superfund Site
Wharton, Morris County
MW19/Hot Spot 1

The New Jersey Department of Environmental Protection (Department) and EPA have reviewed the letter entitled NJDEP Review of the MW19/Hot Spot 1 Area Remedial Investigation Report dated May 15, 2000 and have the following comments:

Department's Comments

1. It is unclear from Figure 1 what effect the sewer line has on the shallow ground water flow. The ground water flow regime is depicted without data. No ground water elevations are available past the property line on Ross Street or past MW-19-8. Also, seasonal ground water variations most likely will significantly alter the depicted flow regime. Accordingly, the ground water flow depicted in this figure is speculative/interpretive. Please explain how the flow map in this figure is representative of site conditions.
2. If the revised ground water contours provided in Figure 2 and the explanation that the sewer line intercepts ground water flow are in fact correct, a clean zone boundary for BTEX contamination has not been established. The ground water contours indicate MW-19-7 to be the most down-gradient monitor well, although BTEX levels exceed Ground Water Quality Criteria in this well.
3. The document states that the water sample collected from HP-4 confirms that no constituents of concern were detected in shallow ground water downgradient of MW-19-7. HP-4 was a hydropunch location sampled on only one occasion, over one year ago. The ground water sample from this temporary well location was for screening

purposes only and not to be used to confirm ground water quality from a migrating plume over one year later. Based on the elevated levels of toluene, ethylbenzene, and xylene at MW-19-7, it has been documented that these compounds exceed the Ground Water Quality Criteria. Therefore, horizontal delineation has not been established.

EPA's Comments

4. The letter states that delineation of the MW19/Hot Spot 1 Area is complete. This is based on the fact that ground water flow is heavily influenced by the presence of coarse permeable base material along an interceptor sewer transect on Ross Street, immediately downgradient of the site. To support this argument, ground water contours are presented in Figure 1. EPA has previously suggested that the presence of sewer lines could have an effect on local ground water flow, and may serve as a preferential pathway. While EPA is pleased that these concerns have been taken into consideration, the presentation and conclusions drawn are largely conjectural and not supported. The sharp turn in flow direction indicated on the figure is based on water levels in MW-19-8 and MW-19-7, which are the same, and so not definitive of the conclusion. Moreover, if the sewer is serving as a preferential pathway, this finding makes for a more complicated case than presented, and the logic is flawed, for two main reasons. First, the identification of the sewer route in itself is not sufficient data upon which to rule out that ground water (and contaminants) may still be flowing to the north, perhaps under the sewer line, and so follow the previously identified gradient, thus making MW-19-8 side gradient to flow.

Second, if the sewer line is acting as a preferred pathway, as claimed, it is also a preferred pathway for contaminant transport as well. This has been overlooked, thus contaminants migrating along the pathway may not be apparent in MW-19-8. Therefore, EPA reaffirms its previously stated position that delineation is not complete, and an additional monitoring well is needed.

5. In addition, as mentioned above, the possibility of vertical contaminant migration has not been explored, and still remains to be addressed. The floating behavior of separate phase LNAPL, which is cited as the rationale for limiting the investigation to delineate shallow ground water only, does not apply to dissolved phase contaminants as these tend to move with ground water flow. Furthermore, although one well point has shown an upward gradient, it in no way precludes the possibility that contaminants are present at greater depths. Nor does it prove that an upward vertical gradient persists most of the time. EPA restates its position that the question of a vertical distribution of contaminants must be investigated with a downgradient well.

As discussed during the July 31, 2000 conference call, a minimum of one monitoring well must be installed north of the sewer line. In accordance with the September 26, 1986 Administrative Consent Order, paragraphs 18 and 19, a work plan must be submitted within sixty (60) days from the receipt of this letter addressing the above

comments, including a map showing the proposed location of this additional monitoring well.

Please contact me at (609) 633-7261 if you have any questions.

Sincerely,



Gwen B. Zervas, P.E.
Case Manager
Bureau of Case Management

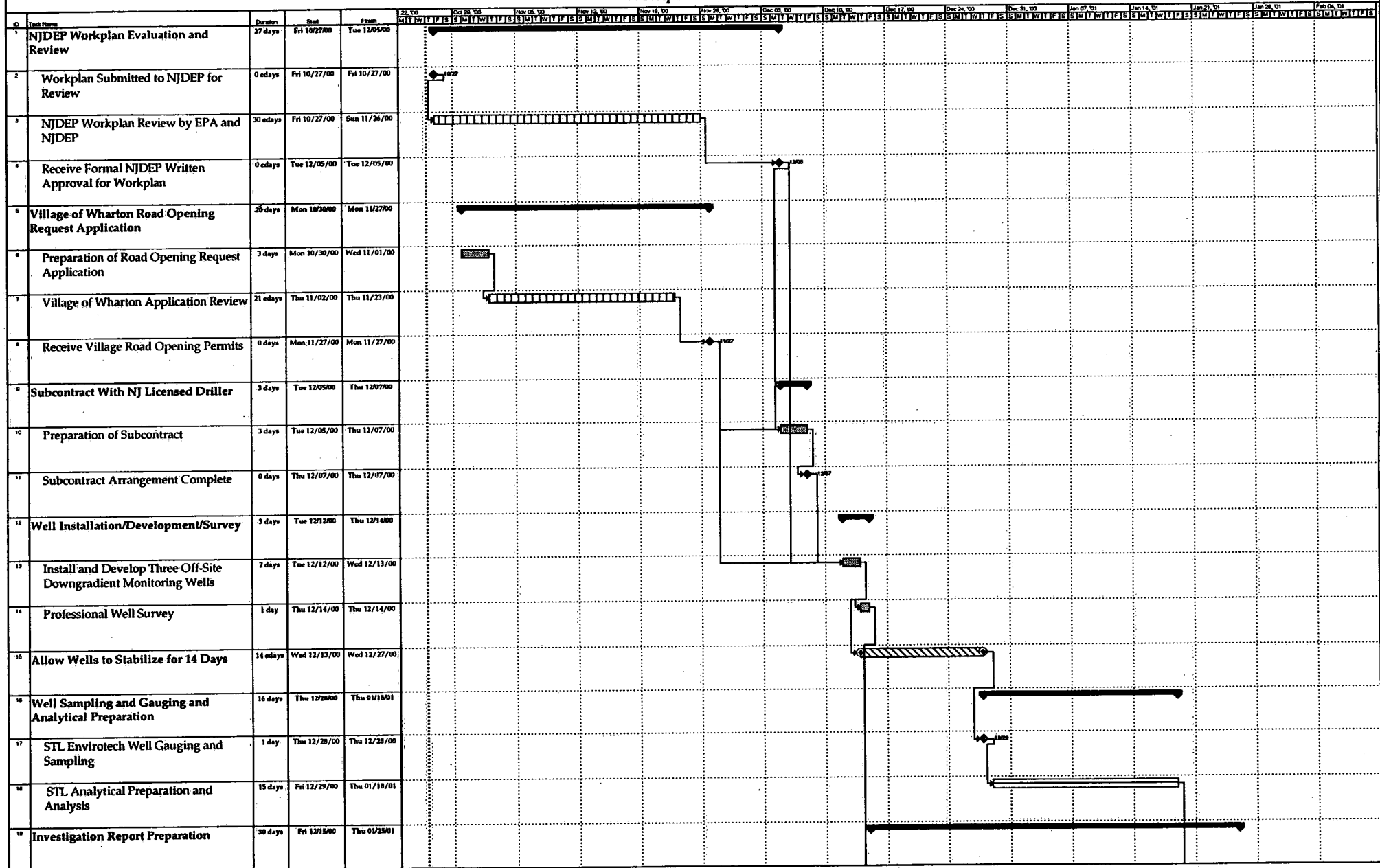
C: Stephen Cipot, EPA
Nicholas Clevett, RMT
George Blyskun, BGWPA
John Prendergast, BEERA

Appendix B

Workplan Schedule

L.E. Carpenter Company
MW19/Hot Spot 1 Off Site Groundwater Investigation
Workplan Schedule

Project Number 3868.10



Project MW19/Hot Spot 1
 Date Thu 10/26/00

RMT Task

Milestones

Summary

Wharton Review Time

NJDEP Review Time

Project No. 3868.10
 MW19/Hot Spot 1 AOC

14 Day Well Development

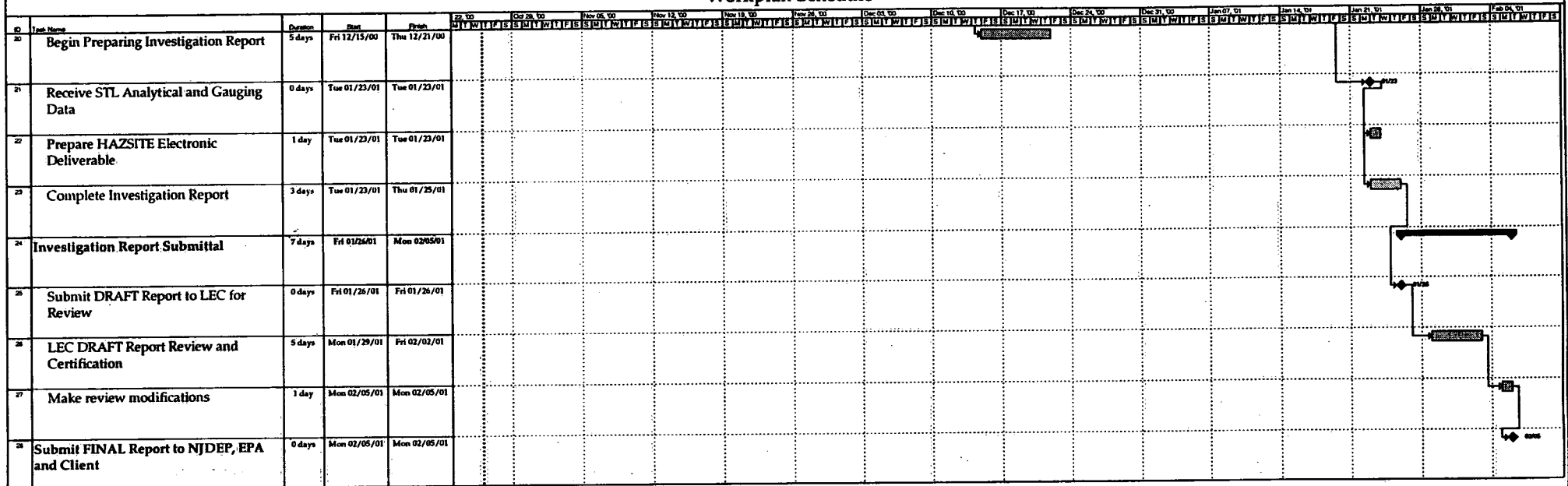
Legend

L.E. Carpenter
 Wharton, New Jersey

Prepared By: Nicholas J. Clevett
 Project Manager

L.E. Carpenter Company
MW19/Hot Spot 1 Off Site Groundwater Investigation
Workplan Schedule

Project Number 3868.10



Appendix C

Health and Safety Plan



Site Health & Safety Plan

1. General Information

Project: MW19/HS1 Off-Site Well Installation

Project Number: 00-03868.10

Site Location: L.E. Carpenter - Wharton, NJ

Project Manager: Nicholas J. Clevett

Prepared By: David A. Yaros

Date: 10/26/00

Approved By:

Nicholas J. Clevett

(PM)

Nicholas J. Clevett

(HSC)

Date:

10/26/00

10/26/00

TEAM MEMBER	RESPONSIBILITIES
Nicholas Clevett	RMT Site Health and Safety Representative and Project Manager
Jim Dexter	Hydrogeologist

2. Training and Medical Surveillance

Training Level Required:

- ☒ HAZWOPER 40/8 hour, First Aid, CPR (for all Type 3 sites)
- ☐ Specialty (e.g., confined space, lockout/tagout, Troxler radiation safety)

List:

Medical Surveillance Level Required:

- ☒ HAZWOPER physical
- ☐ Special medical tests

List:

Exceptions/Modifications to training or medical surveillance required: None

3. Personal Protection

Based on evaluation of potential hazards, the following levels of personal protection have been designated for the applicable work areas or tasks:

LOCATION	JOB FUNCTION	LEVEL OF PROTECTION
MW19/Hot Spot 1	Well Installation	<input checked="" type="checkbox"/> D <input type="checkbox"/> C <input type="checkbox"/> B <input type="checkbox"/> A
		<input type="checkbox"/> D <input type="checkbox"/> C <input type="checkbox"/> B <input type="checkbox"/> A
		<input type="checkbox"/> D <input type="checkbox"/> C <input type="checkbox"/> B <input type="checkbox"/> A
		<input type="checkbox"/> D <input type="checkbox"/> C <input type="checkbox"/> B <input type="checkbox"/> A

Specific protective equipment for each level are as follows: ⁽¹⁾

Level A Respiratory: <input type="checkbox"/> SCBA <input type="checkbox"/> Air-Line Supplied Air Respirator <input type="checkbox"/> Other (describe)	Level B Respiratory: <input type="checkbox"/> SCBA <input type="checkbox"/> Air-Line Supplied Air Respirator <input type="checkbox"/> Other - Level C-D plus the following exceptions/modifications -
Level C Respiratory - Air-purifying respirator with cartridge/canister type: <input type="checkbox"/> HEPA, acid gas, organic vapors (e.g., MSA GMC-H) <input type="checkbox"/> HEPA only <input type="checkbox"/> Other - Level D plus the following exceptions/modifications -	Level D Respiratory - None Other: <input checked="" type="checkbox"/> Safety glasses <input checked="" type="checkbox"/> Hard hat <input checked="" type="checkbox"/> Safety shoes <input checked="" type="checkbox"/> Ear plugs/muffs <input type="checkbox"/> Snake chaps/Gaiters <input checked="" type="checkbox"/> Protective clothing and/or gloves required (i.e., modified Level D) <input type="checkbox"/> Other (describe)
Other skin, eyes, and fall protection required: <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> Gloves: <input type="checkbox"/> Butyl rubber <input type="checkbox"/> PVC-coated <input type="checkbox"/> Neoprene <input type="checkbox"/> Nitrile <input type="checkbox"/> Other (describe) </div> <div style="width: 45%;"> Protective clothing: <input type="checkbox"/> Tyvek® or equivalent <input type="checkbox"/> Tyvek® polyethylene-coated or equivalent <input type="checkbox"/> Tyvek® Saranex® or equivalent <input type="checkbox"/> Other (describe) </div> </div>	
Radiation Safety: <input type="checkbox"/> Dosimeter Badge <input type="checkbox"/> Other (describe)	

⁽¹⁾ See RMT Health and Safety Manual for minimum criteria.

Criteria for changing protection levels are as follows:

CHANGE	APPROVALS REQUIRED ⁽¹⁾		
	HSR	HSC	CHSM
To Level C when Ambient PID Monitoring Warrants	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
To Level when	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
To Level when	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
To Level when	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Evacuate the area when:			

- (1) HSR: On-site Health & Safety Representative
HSC: Regional Health & Safety Coordinator
CHSM: Corporate Health & Safety Manager

Changes to the level of protection shall be made after the required approvals are obtained. All changes shall be recorded in the field log and reported to the HSC as soon as possible.

4. Air Monitoring

The following monitoring instruments shall be used on-site to measure airborne contaminant concentrations in the breathing zone:

	FREQUENCY OF MONITORING
<input type="checkbox"/> Combustible Gas Indicator	
<input type="checkbox"/> O ₂ Monitor	
<input type="checkbox"/> Colorimetric Tubes (type)	
<input checked="" type="checkbox"/> PID	Randomly throughout each well installation
<input type="checkbox"/> FID	
<input type="checkbox"/> Other (specify)	

5. Site Control (Describe or attach sketch)

Work Zones:

Support Zone: Minimum of 50 feet from exclusion zone

Contamination Reduction Zone (area used for decontamination): Minimum of 30 feet from exclusion zone

Exclusion Zone (area considered contaminated): All well installations

Site Entry Procedures:

- ☐ Notify Site Health and Safety Representative.
- ☒ Read Health & Safety Plan and sign Acknowledgment Statement
- ☐ Check in with facility security guard.
- ☒ Wear proper personal protective equipment.
- ☐ Attend facility orientation.
- ☒ Conduct "Toolbox" safety meeting.
- ☐ Other (specify):

Decontamination Procedures:

Personnel:

Equipment:

Investigation-derived Material Disposal:

- ☐ *Leave on site for disposal.*
- ☒ *Other (describe) Transport on-site for proper management*

Work Limitations (time of day, buddy system, etc.): During daylight hours

Troxler Radiation Safety:

- ☐ Radiation information is not applicable to this project.
- ☐ Notify RSO.
- ☐ Wear dosimeter badge when handling gauge.
- ☐ Post applicable radiation signs.
- ☐ Post emergency numbers.
- ☐ Provide at least two lock systems for overnight storage.
- ☐ Maintain storage at least 15 feet from full-time workstations.
- ☐ Block and brace gauge during "all" transportation.
- ☐ Limit "public" exposure to gauge while in use.
- ☐ Provide sketch of gauge storage to RSO.

Contingency Planning

LOCAL EMERGENCY RESOURCES:	
Ambulance:	911
Hospital Emergency Room:	911
Poison Control Center	Pennsylvania (800) 521-6110
Police:	911
Fire Department:	911
USEPA Contact: Steven Cipot (Case Manager Region II, NY, NY)	(212) 637-7261
Other (Troxler, NRC, Agreement State Agency, etc.: Gwen Zervas, NJDEP Case Manager	(609) 633-7261

SITE RESOURCES:	
Water Supply:	
Telephone:	
Radio:	
Other:	

EMERGENCY CONTACTS:		
RMT Technical Contact:	Nicholas Clevett	(312) 575-0200
RMT Project Manager	Nicholas Clevett	(312) 575-0200
RMT Corporate Health & Safety Manager:	Shannon Posey	(work) (864) 234-9431 (home) (864) 898-3003 (cell) (864) 787-7918
Radiation Safety Officer (RSO)	John Hanson	(work) (608) 662-5238 (home) (608) 222-4588 EMERGENCY only pager/cell phone (608) 334-6641
RMT Health & Safety Coordinator:	Nicholas Clevett	(312) 575-0200
Contractor Office Contact:	To Be Determined	
Field Contact:	Jim Dexter	(734) 971-7080
Client Contact:	Cris Anderson	(216) 589-4020
Facility Manager:	Ken Redcliff	At Site (inactive)

Emergency Routes (give directions or attach map):

Hospital: University Hospital, 150 Bergen Street, Newark, NJ 07103, (973) 972-4300

Other:

Emergency Procedures:

If an emergency develops at the site, the discoverer will take the following course of action:

- Notify the proper emergency services (fire, police, ambulance, etc.) for assistance.
- Notify other affected personnel at the site.
- Contact RMT and the client representative to inform them of the incident as soon as possible.
- Prepare a summary report of the incident for RMT and the client representative.

Emergency Equipment Required On-site:

- | | |
|--|---|
| <input checked="" type="checkbox"/> First Aid/Bloodborne Pathogens Kit | <input checked="" type="checkbox"/> Fire Extinguisher |
| <input type="checkbox"/> Eye Wash | <input type="checkbox"/> Spill Control Media |
| <input type="checkbox"/> Shower | <input type="checkbox"/> Other: (describe) |
| <input type="checkbox"/> Other: (describe) | <input type="checkbox"/> Other: (describe) |

Acknowledgment Statement:

As an employee of RMT, Inc., I have reviewed the Hazard Assessment and Site Health & Safety Plan. I hereby acknowledge that I have received the required level of training and medical surveillance, that I am knowledgeable about the contents of this site-specific Health & Safety Plan, and that I will use personal protective equipment and follow procedures specified in the Health & Safety Plan.

Signatures of RMT Site Personnel (Required):

_____	Date: _____
_____	Date: _____
_____	Date: _____
_____	Date: _____



Health & Safety Plan Initial Report of Incident

1. Type of Incident

☐ Injury/exposure only ☐ Property loss only ☐ Injury and property loss ☐ Reportable incident without injury or property loss

Project Number: _____ Project Name: _____ Date of Incident: _____ Time: ☐ AM ☐ PM

Incident Location: _____

Name(s) of witnesses to incident, if any: _____

If incident caused death or serious injury, this report must be called in to the Health & Safety Director and Human Resources Manager immediately!!!

2. Injury/Exposure

For any injury, a "First Report of Injury" form must also be completed. This is available from Human Resources.

Injured employee's full name: _____ Did injured see a doctor? ☐ Yes ☐ No

Name and address of treating doctor (and hospital, if one was used): _____

Describe affected body part and the type/degree of damage or exposure: _____

3. Incident Description and Analysis

Give detailed description of incident (attach additional pages if necessary): _____

Provide an explanation if the incident was associated with the following:

Job factors: _____

Personal factors: _____

Unsafe conditions: _____

Unsafe practices: _____

Other: _____

Have similar incidents occurred before? ☐ Yes ☐ No ☐ Don't know

Why? _____

4. Property Damage/Loss/Theft

Exactly what was damaged, lost, or stolen? _____

Was this reported to police? ☐ Yes ☐ No If yes, list departments involved: _____

Describe amount of damage/lost/theft: _____

5. Action Items

List actions which could be taken to prevent the occurrence of this incident in the future, or to minimize the effects of future incidents. _____

6. Signature

Name of person completing this form: _____ Office Location: _____ Date: _____

Signature of person completing this form: _____

Send this report to the Health & Safety Coordinator who will provide copies to the Corporate Health & Safety Manager, Project Manager, Department Manager, and/or Human Resources Manager, as required.

This report does not replace a Worker's Compensation (First Report of Injury) or Insurance Claim form which may need to be completed for Human Resources or Loss Prevention.

Office Use Only
Reportable: ☐ Yes ☐ No

**Health & Safety
Initial Report of Incident**

- Section 1** This report is required to be completed if an incident involves the following:
- A work-related injury, illness, or exposure affecting an RMT employee or other personnel working or visiting the location (Sections 1, 2, 3, and 5).
 - Property theft, loss, or damage through an accident, mechanical failure, weather conditions, etc. (Sections 1, 3, 4, and 5).
 - A combination of the above (Sections 1, 2, 3, 4, and 5).
 - Be sure to list any witnesses and their company affiliation, if known. If there is a death or serious injury, the Health and Safety Director and Human Resources Manager must be notified *immediately*.
- Section 2** A "First Report of Injury" form for worker's compensation must *also* be completed for any RMT employee injury. Your Human Resources Representative will provide a form. If the degree of harm is unknown at the time the form is being completed, state "unknown" in the blank.
- Section 3** Examples: Job factors may include long work hours, improper equipment, failure of safety devices, etc.
- Unsafe conditions may include weather, poor ventilation or lighting, traffic, slippery ground, etc.
 - Unsafe practices may include failure to use safety devices, failure to follow company policies or procedures, etc.
 - Personal factors may include lack of sleep, prior illness, improper training, etc.
- Section 4** Describe the property which was damaged/lost/stolen. Include police report number, if applicable. An insurance claim form is probably required. The office Administrative Supervisor can supply a form and answer questions.
- Section 5** Describe any actions you feel may be effective to prevent the recurrence.
- Section 6** Print your name followed by your signature, office location, and the date that you completed the form. The completed form goes to your office's Health and Safety Coordinator who will provide copies to appropriate managers as required.



Health & Safety Plan Investigation of Near Miss Incident

Each incident should be investigated. The object is to prevent recurrence and it is only by thorough investigation (visit scene of incident and talk to witness) that real causes can be determined and corrected.

Name of Person Involved in Near Miss:		Job Title:		Office Location:	
Age:	<input type="checkbox"/> Female <input type="checkbox"/> Male	Length of time with RMT:	Date of Near Miss:	Time:	<input type="checkbox"/> AM <input type="checkbox"/> PM
Project Number:	Project Name:		Near Miss Location:		
Was employee temporarily working in another department or job at time of Near Miss?		<input type="checkbox"/> Yes <input type="checkbox"/> No	How long has employee worked at job where Near Miss occurred?		
How did Near Miss occur? Tell all objects and substances involved in Near Miss. What machine or tool? What operations?					
Please indicate which of the following contributed to the Near Miss:					
<input type="checkbox"/> Failure to secure	<input type="checkbox"/> Improper instructions	<input type="checkbox"/> Lack of training or skill	<input type="checkbox"/> Poor housekeeping		
<input type="checkbox"/> Horseplay	<input type="checkbox"/> Improper maintenance	<input type="checkbox"/> Operating without authority	<input type="checkbox"/> Poor ventilation		
<input type="checkbox"/> Improper dress	<input type="checkbox"/> Improper protective equipment	<input type="checkbox"/> Physical or mental defect	<input type="checkbox"/> Unsafe equipment		
<input type="checkbox"/> Improper guarding	<input type="checkbox"/> Inoperative safety device	<input type="checkbox"/> Unsafe arrangement or process	<input type="checkbox"/> Unsafe position		
Analysis and Review					
Give us your honest comments on the following questions. We are not trying to blame anyone. Your opinion may help us to prevent repetition.					
What do you consider the real cause of this Near Miss? (Please do not use the word "careless.")					
What steps are being taken to prevent similar incidents or recurrences? (Example: Employees are being instructed in correct lifting and to get assistance with heavy loads.)					
Name of person completing this form:		Office Location:		Date:	
Signature of person completing this form:					
Send this report to the Health & Safety Coordinator who will provide copies to the Corporate Health & Safety Manager, Project Manager, Department Manager, and/or Human Resources Manager, as required.					

Health & Safety
Investigation of Near Miss Incident

This report is required to be completed if the potential for an incident occurs. This involves an incident that could have resulted in an accident, but fortunately/luckily was avoided. The following example will be used throughout this form: A ladder, its base resting on a slick surface, is leaning up against the side of building. A worker climbs the ladder to get onto the roof. As the worker is climbing onto the roof from the ladder, the ladder slips out from under the worker. The worker makes it onto the roof as the ladder falls to the ground. The potential for a damaging accident occurred, but fortunately was avoided. This is a near miss.

The following questions should be answered when completing this form:

- How did the Near Miss occur?
- What do you consider the real cause of this Near Miss?
- What steps are being taken to prevent similar incidents or recurrences?

Analysis and Review

- What do you consider the real cause of the Near Miss?

Using the near miss example described above, the real cause of the near miss is simply that the base of the ladder was placed on a slick surface that allowed it to slide out as the worker made his/her transition from the top of the ladder onto the roof.

- What steps are being taken to prevent similar incidents or recurrences?

Continuing with the example given above, the worker should have had an assistant holding the ladder as he/she was climbing to the roof. Also, to keep the base of the ladder from slipping, a rubber mat should have been placed under the ladder.

Appendix D

Hazard Assessment

Hazard Assessment

1. General Information

Project: MW19/HS1 Off-Site Well Installation

Project Number: 00-03868.10

Site Location: L.E. Carpenter - Wharton, NJ

Project Manager: Nicholas J. Clevett

Prepared By: David A. Yaros

Date: 10/26/00

Approved By:

Nicholas J. Clevett

(PM)

Nicholas J. Clevett

(HSC)

Date:

10/26/00

10/26/00

Proposed Scope of Work and Specific Tasks: Install three (3) off-site monitoring wells downgradient of MW19/HS1 Area of Concern.

RMT Role On-site:

- ☐ Resident Project Representative (e.g., "Observe and Document")
- ☐ Construction Manager (e.g., Managing Contractor/General Contractor)
- ☒ Representative for Client (e.g., "Agent for Owner")
- ☐ Other (describe)

Proposed Dates of On-site Work: December 5, 2000 through December 10, 2000

Background Information Review: ☐ Preliminary ☐ Moderate ☒ Substantial

Documentation/Summary Overall Hazard: ☐ Serious ☐ Moderate
☒ Low ☐ Unknown

2. Site Characterization

Facility Description: Site is currently regulated under CERCLA as a Superfund Clean-up. Most buildings, to date, have been demolished. The site undergoes monthly enhanced fluid recovery to extract free phase product from the surface of the water table, in addition to quarterly groundwater monitoring. Currently, the site is undergoing further Phase II subsurface investigations to fully delineate impact to groundwater and native soils. Certain areas have received closure from the NJDEP as areas of concern.

Status: ☐ Active ☒ Inactive ☐ Unknown

Operations (current and past): When active (1943 - 1987) the site operated as a manufacturing facility for vinyl wall coverings. Portions of the site are currently subleased as warehouse space

Unusual Features (utilities, terrain, etc.): The site has undergone extensive demolition, east of the rail spur. As a result, site topography has been altered. The site is bounded by the Rockaway River (South), Washington Forge Pond (West), a drainage ditch (East), and Ross St (North).

History (worker or nonworker injury, complaints from public, previous agency action): Regulated Superfund Site. No knowledge of previous worker injuries is readily available

3. Site Classification:

Site Type Allocated: ☒ 1 Known or controlled hazards ☐ 2 Unknown and/or uncontrolled hazards ☐ 3 Regulated by 29 CFR 1910.120

Comments: Extensive site investigation has identified all contaminants of concern in both the soil and liquid site matrix.

4. Hazard Evaluation

Potential Chemical Hazards:

SUBSTANCE NAME ⁽¹⁾	PHYSICAL STATE	KNOWN CONCENTRATION LEVELS PRESENT ⁽²⁾	POTENTIAL ROUTES OF EXPOSURE	ACGIH TLV	OSHA PEL
Toluene	Liquid	123 ppm	Inh, Abs, Ing, Con		100 ppm
Total Xylenes	Liquid	11 ppm	Inh, Abs, Ing, Con		100 ppm
Ethylbenzene	Liquid	1.88 ppm	Inh, Ing, Con		100 ppm
Lead	Solid	5,404 ppm	Inh, Ing, Con		0.1 mg/m ³
bis (2-Ethylhexyl) Phthalate (DEHP)	Liquid	14 ppm	Inh, Ing, Con		Unknown
	Solid	14,000 ppm			

(1) Attach MSDS if available.

(2) Attach laboratory results or tables if available.

Ionizing Radiation:

Did the "client" use radioactive materials on site, past or present: ☐ Yes (complete table below) ☒ No

Possibility of contamination or exposure due to past or present use of radioactive materials:

☐ Yes (complete table below) ☒ No

SOURCE	QUANTITY	PHYSICAL STATE	POTENTIAL OF EXPOSURE	CONTROL MEASURE

If the answers to the above questions are both No, this table will remain blank.

Will a nuclear moisture/density or XRF gauge be used on site? ☐ Yes (see below) ☒ No

If yes, will it be a RMT gauge?

☐ Yes (see below) ☐ No (see Subcontractor H&S Qualifications/Performance Form)

If the answer to any questions in this section is "Yes," send a copy of the Hazard Assessment and Health & Safety Plan to the RMT Radiation Safety Officer (RSO).

Physical Safety Hazards On-Site and Control Measures

HAZARD	CONTROL MEASURE
Noise	Ear plugs
Heat Stress	Work rest regime, hydration
Utilities	Utility location prior to intrinsic subsurface activity

Appendix E

Emergency Points of Contact

L.E. Carpenter & Company
170 North Main Street
Wharton, New Jersey

EMERGENCY NOTIFICATION

IN CASE OF AN EMERGENCY, PLEASE CONTACT THE FOLLOWING PARTIES

- ♦ **L.E. Carpenter & Company., On-Site Contact**
Mr. Ken Redcliff; (973) 366-9577 main; (973) 254-0022 pager

- ♦ **RMT, Inc., 222 South Riverside Plaza, Suite 820, Chicago, IL 60606**
Function: Environmental Project Management and Engineering
Project Manager: Mr. Nicholas J. Clevett
(312) 575-0200 Phone
(312) 575-0300 Fax
email: Nicholas.Clevett@rmtinc.com

- ♦ **L.E. Carpenter & Company., 33587 Walker Road, Avon lake, OH, 44012**
Function: Client
Point of Contact: Mr. Cris Anderson
Position: Director of Environmental Affairs
(440) 930-1334 Phone
(440) 930-3034 Fax

- ♦ **New Jersey Department of Environmental Protection (NJDEP)**
Function: Regulator
Point of Contact: Mrs. Gwen Zervas, Case Manager
(609) 633-7261 Phone

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